





Document: Datasheet

Model #: 3188

Product's Page: <u>ww</u>w.sunrom.com/p-508.html

Combustible Gas Sensor

Used in gas leakage detecting equipments for detecting of LPG, iso-butane, propane, LNG combustible gases. The sensor does not get trigger with the noise of alcohol, cooking fumes and cigarette smoke.

Date: 20-Jul-08

Applications

- Gas leak detection system
- Fire/Safety detection system
- Gas leak alarm
- Gas detector

Features

- High sensitivity LPG, iso-butane, propane
- Small sensitivity to alcohol, smoke
- Fast response
- Wide detection range
- Stable performance and long life
- Simple drive circuit

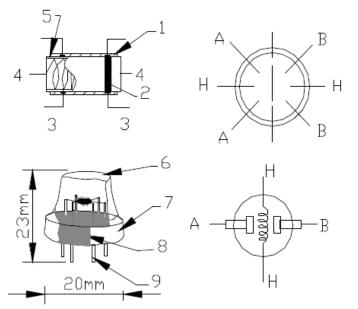
Specification

Parameter	Value	Unit
Target Gas	iso-butane, Propane, LPG	
Detection Range	100 to 10000	ppm(part per millions)
Calibrated Gas	1000ppm iso-butane	
Sensitivity	R in air/Rin typical gas≥5	
Sensing Resistance	40 to 400KΩ in air	Ω Ohms
Response Time	≤10s	Seconds
Resume Time	≤30s	Seconds
Heating Resistance	31Ω±3Ω	ΩOhms
Heating Current	≤180mA	mA
Heater Voltage	5V±0.2V	Volts
Heating Consumption	≤900mW	mW
Circuit Voltage	≤15V	Volts
Standard Working	Temperature:-10°C to 65°C Humidity: ≤95%RH	
Condition		
Storage Condition	Temperature: -20°C-70°C Hum: ≤ 70%RH	



Information

FIGURE 1STRUCTURE & MEASURING CIRCUIT



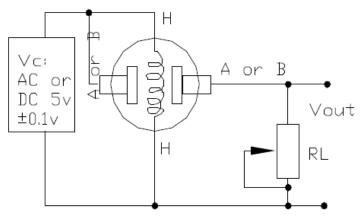
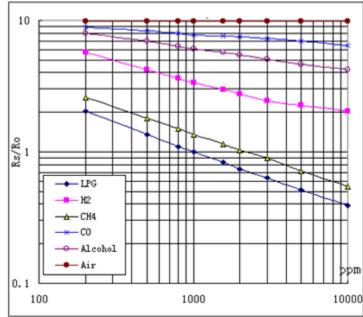


FIGURE 2 SENSITIVITY CHARACTERISTICS



Typical Sensitivity Characteristics of sensor for several gases in their

Temp: 20 deg C

Humidity: 65%

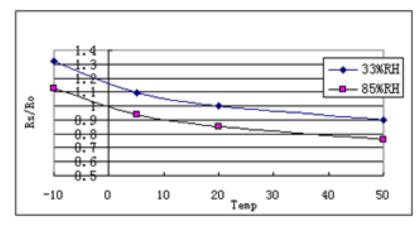
Oxygen concentration: 21%

RL = 20K Ohm

Ro = Sensor resistance at 1000 ppm of LPG in clean air

Rs = Sensor resistance at various concentrations of gases

FIGURE 3 DEPENDENCY ON TEMPERATURE AND HUMIDITY

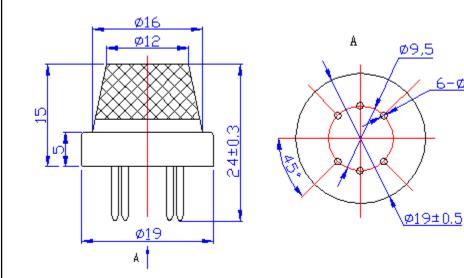


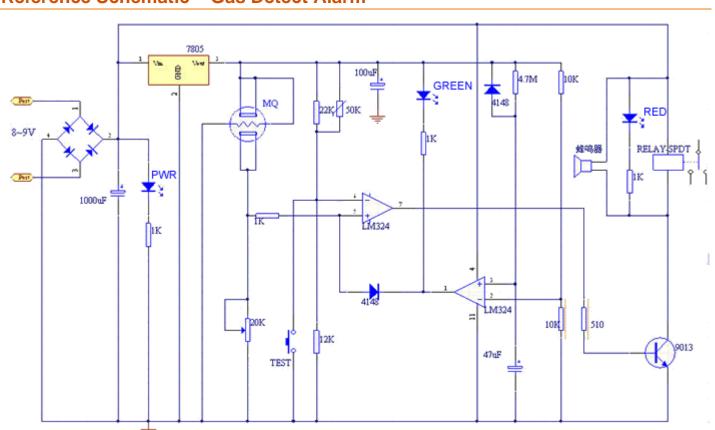
Ro = Sensor Resistance at 1000 ppm of LPG in air at 33% RH and 20 Deg C.

Rs = Sensor Resistance at 1000 ppm of LPG in air at different temperature and humidity.

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Dimensions in mm





Reference Schematic – Gas Detect Alarm

Refers to the above circuit, Check all the assemblage, connecting the power supply, the "green" LED should light, When testing, the E1, E2 should be 9V, 5V separately. There is a delay lasting about 5 minutes caused by the delay circuit with shall prevent the false alarm at first connecting power supply. After about 5 minutes, the delay ends. Green LED switches OFF now and alarm is ready to use. Upon gas detection the RED led with buzzer comes on. Adjust preset for sensitivity adjustment. If the detected gas is LPG, Butane and propane which is heavier than normal air, Install the gas leak alarm about 1.00 meter above the ground, adversely, For the Natural gas, Methane, coal gas, CO and H2, which is lighter than the normal air, Install gas leak alarm about 1 meter below the roof, Both of them are should be with good air circulation.